

**REMARKS**

Claims 6, 14, 16-19, 21 and 23-27 are pending. Claims 6, 14 and 16-19 are withdrawn from consideration; claims 23-27 stand ready for further action on the merits; and claim 21 stands allowed.

In the instant amendment withdrawn claims 14, 16 and 18 are currently amended to incorporate limitations previously recited in claim 12 as it was amended on December 13, 2005 (*and which claim has previously been canceled*).

***Claim Rejections – 35 USC § 102(e)***

Claims 23-25 and 27 stand rejected under the provisions of 35 USC § 102(e) as being anticipated by **Kuo et al. US '993** (US 6,300,993B1).

Claims 23-25 and 27 stand rejected under the provisions of 35 USC § 102(e) as being anticipated by **Kubo et al. US '943** (US 7,084,943B2).

Reconsideration and withdraw of the above outstanding rejections are respectfully requested based on the following considerations.

**Legal Standard for Determining Anticipation**

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). “When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art.” *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir.

2001) “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Legal Standard for Determining Prima Facie Obviousness

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

“There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art.” *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) (The combination of the references taught every element of the claimed invention, however without a motivation to combine, a rejection based on a *prima facie* case of obvious was held improper.).

“In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification.” *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. “The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art.” *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The Supreme Court of the United States has recently held that the teaching, suggestion, motivation test is a valid test for obviousness, but one which cannot be too rigidly applied. See *KSR Int'l Co. v Teleflex Inc.*, 127 SCt 1727, 82 USPQ2d 1385 (U.S. 2007). The Supreme Court in *KSR Int'l Co. v. Teleflex, Inc.*, *ibid.*, reaffirmed the Graham factors in the determination of obviousness under 35 U.S.C. § 103(a). The four factual inquiries under Graham are:

- (a) determining the scope and contents of the prior art;

- (b) ascertaining the differences between the prior art and the claims in issue;
- (c) resolving the level of ordinary skill in the pertinent art; and
- (d) evaluating evidence of secondary consideration.

*Graham v. John Deere*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (U.S. 1966).

The Court in *KSR Int'l Co. v. Teleflex, Inc., supra.*, did not totally reject the use of "teaching, suggestion, or motivation" as a factor in the obviousness analysis. Rather, the Court recognized that a showing of "teaching, suggestion, or motivation" to combine the prior art to meet the claimed subject matter could provide a helpful insight in determining whether the claimed subject matter is obvious under 35 U.S.C. § 103(a).

Even so, the Court in *KSR Int'l Co. v. Teleflex, Inc., ibid.*, rejected a rigid application of the "teaching, suggestion, or motivation" (TSM) test, which required a showing of some teaching, suggestion, or motivation in the prior art that would lead one of ordinary skill in the art to combine the prior art elements in the manner claimed in the application or patent before holding the claimed subject matter to be obvious.

Accordingly, while the courts have adopted a more flexible teaching, suggestion, motivation (TSM) test in connection with the obviousness standard based on the *KSR v. Teleflex* case, which case involved a mechanical device in a relatively predictable technological area, it remains true that, despite this altered standard, the courts recognize inventors face additional barriers in relatively unpredictable technological areas as noted in *Takeda Chemical Industries, Ltd. v. Alphapharm Pty., Ltd.*, 83 USPQ2d 1169 (Fed. Cir. 2007).

Further, the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

"[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336, quoted with approval in *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007).

*Distinctions Over the Cited Art*

The present invention relates to a method of producing a foil. A foil has domains having molecular alignment states different from each other. Domains having molecular alignment states different from each other are formed by using a reactive liquid crystal molecule in a foil. Molecular alignment state does not change due to a voltage in such a foil.

The instantly cited references (**Kuo et al.** US 6,300,993B1 and **Kubo et al.** US 7,084,943,B2) disclose a liquid crystal layer in which an angle is changed by a voltage applied to a cell, but such a liquid crystal layer is not a foil. Additionally, liquid crystal molecules constituting the liquid crystal layer are not reactive. Thus, neither **Kuo et al.** nor **Kubo et al.** disclose or suggest a method of producing a foil, or more specifically the instant invention as recited in pending claims 23-25 and 27.

**Kuo et al.** discloses explanations of its Fig. 2a and 2b at its column 3, lines 1-25 (*see below*). The domain has different angles at on-state and at OFF state (with or without electric field), respectively. That is, it is clear that an alignment state is changed by an electric field and that it is not a foil. Additionally, **Kuo et al.** does not disclose or suggest a foil.

**Kuo et al. US '993  
(Figures 2a and 2b)**

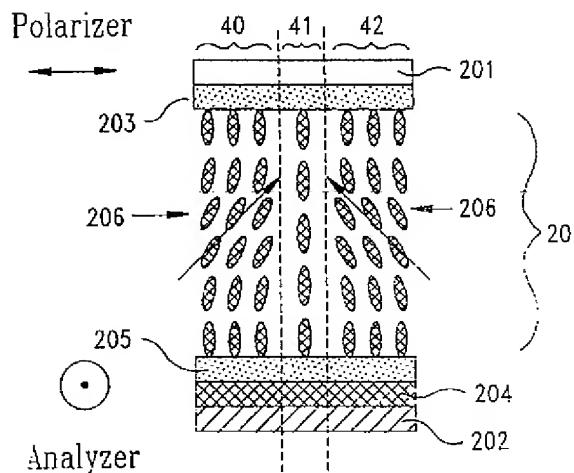


FIG.2a

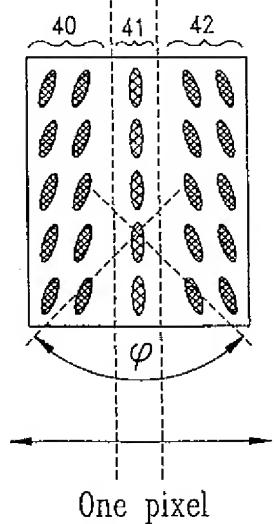


FIG.2b

**Kuo et al. US '993  
(Column 3, lines 1-25)**

FIG. 2a is a fragmentary cross section view of a two-domain VA(Vertical Aligned) mode LCD with negative compensator. Still referring to FIG. 2a, there is a detail illustration of a LCD panel structure especially to the orientation of liquid crystal molecules. In this figure, the LCD panel is in on-state the liquid crystal molecules 206 are chiral nematic orientated, and there are two domains with an overlap region in one pixel. The tilt direction (azimuthal) of liquid crystal molecules in overlap region 41 has a angle  $\Phi$  that is not equal to 90 degrees (it can be greater or less than 90 degrees) with respect to the tilt direction of the liquid crystal molecules in domains 40 and 42.

FIG. 2b is a top view of a two-domain VA (Vertical Aligned) mode LCD with negative compensator 204, the tilt angle  $\Phi$  that project on the azimuthal of substrate between the orientation of liquid crystal molecules in domains 40 and 42 are not equal to 180 degree (it can greater or less than 180 degree). In this embodiment, the liquid crystal molecules in each domain are orientated nearly perpendicular to the surface of substrates with a little pre-tilted angle to the normal of the substrates when an electrode field is not applied (OFF state). The tilt-angle of the liquid crystal molecules that project on the azimuthal of the substrate between the orientation of liquid crystal molecules in two domains is not equal to 180 degree.

Kubo et al. discloses explanations of its Fig. 29 at column 41, line 65 to column 42, line 25 (*see below*). An angle of the liquid crystal layer is changed due to being with or without a

voltage. That is, it is clear that an alignment state is changed by a voltage and that it is not a foil.

Additionally, **Kubo et al.** does not disclose or suggest a foil.

**Kubo et al. US '943**  
(Figures 29A -29E)

FIG. 29A

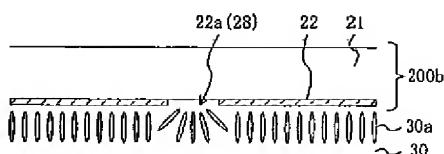


FIG. 29B

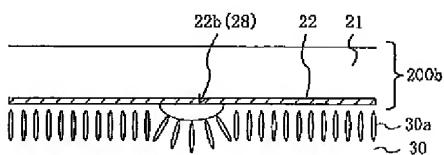


FIG. 29C

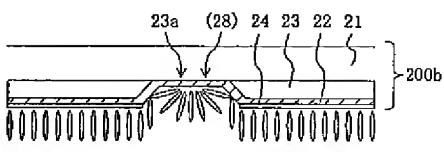


FIG. 29D

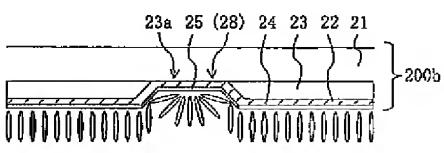
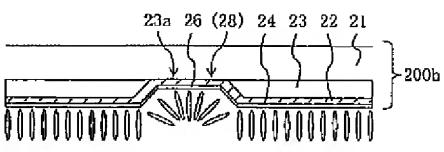


FIG. 29E



**Kubo et al. US '943**  
(Col. 41, line 65 to Col. 42, line 25)

The second orientation-regulating structure 28 illustrated in FIG. 29A is formed by an opening 22a of the counter electrode 22 which is provided so as to oppose the upper conductive layer 14 (e.g., the unit solid portion 14b' of FIG. 15A). A vertical alignment film (not shown) is provided on one surface of the counter substrate 200b which is closer to the liquid crystal layer 30.

The second orientation-regulating structure 28, as the first orientation-regulating structure described above, exerts an orientation-regulating force only in the presence of an applied voltage. Since the second orientation-regulating structure 28 is only required to exert an orientation-regulating force upon the liquid crystal molecules in each liquid crystal domain formed by the first orientation-regulating structure, the size of the opening 22a is smaller than the opening 14a provided in the upper conductive layer 14, and smaller than the unit solid portion 14b' (see, for example, FIG. 15A) which is surrounded by the openings 14a. For example, a sufficient effect can be obtained only with an area less than or equal to one half of that of the opening 14a or the unit solid portion 14b'. When the opening 22a of the counter electrode 22 is provided so as to oppose the central portion of the unit solid portion 14b' of the upper conductive layer 14, the continuity of the orientation of the liquid crystal molecules increases, and it is possible to fix the position of the central axis of the radially-inclined orientation.

Therefore, it is submitted the present invention as recited in pending claims 23-25 and 27 is not anticipated by **Kuo et al.** or **Kubo et al.**, since neither reference provides for each of the limitations recited in the pending claims.

Likewise, it is submitted that the cited art references are incapable of rendering the instant invention as claimed obvious, since they provide no teaching or disclosure, or reason or rationale that would allow one of ordinary skill in the art to arrive at the instant invention as claimed.

Any contentions of the USPTO to the contrary must be reconsidered at present, since the instantly cited references of **Kuo et al.** and **Kubo et al.** fail to provide a proper foundation for a sustainable rejection of pending claims 23-25 and 27 under 35 USC § 102(e) or 35 USC § 103(a), whether such references are considered singularly or in combination.

***Claim Objection – Claim 26***

In the outstanding office action (*see penultimate page*) claim 26 is objected to as being dependent on a rejected base claim (*i.e.*, claim 23), but otherwise indicated to be allowable. Reconsideration and withdraw of this objection is respectfully requested based on the remarks presented herein, which evidence that claims 23-25 and 27 are allowable at present.

**CONCLUSION**

In view of the above amendment, applicant believes that each of pending claims 21 and 23-27 the pending application is in condition for allowance under the provisions of Title 35 of the United States Code.

Application No. 10/799,801  
Amendment dated  
Reply to Office Action of April 11, 2008

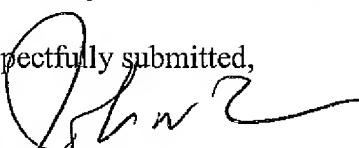
Docket No.: 0152-0802PUS3

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John W. Bailey, Reg. No. 32,881 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

Dated:

Respectfully submitted,

By   
John W. Bailey

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